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Surgical treatment bilateral DVT

Background: Patient X, young sportive man heterozygote factor V von Leiden. CT-phlebography: thrombosis 8cm inferior cava vein, pelvic veins, femoral veins, left popliteal vein. VSM bilateral stripping for 10 years.

Treatment: We create a thrombectomy of the cava vein, iliacal veins, femoral veins, bilateral AV-fistulas and stenting of the left iliacal vein. Post-operative HIT-type II, phenocoumarin for three months.

Follow-up: 3 Months: Light bilateral swellings mainly in the left leg, duplexsonography confirms moderate flow reduction in left distal femoral vein and crural veins, all other veins show good flow. 6 Months: Patient planned for removal AV-fistulas, bilateral swellings still present. Intra-operative venography shows an inferior vena cava occlusion. treated with 2-min-dilatation of 16mm balloon (constriction visible), secondary 4-min-dilatation with 18mm balloon. AV-fistulas not removed, further three months phenocoumarin.

Planned: Control-venography, removal AV-fistulas and perhaps stenting cava vein

Conclusion: Should we primary stent the cava vein after thrombectomy?



2. Kelly De Schuyter

Evaluation of patient satisfaction and quality of life after surgical treatment for varicose veins – comparing conventional surgery and endovenous laser ablation

Varicose veins may be accompanied by significant morbidity which necessitates surgical treatment such as high ligation and stripping (HLS), or recently endovenous laser ablation (EVLA) and radiofrequency ablation.

AIM of study: To evaluate and compare patient satisfaction and quality of life after HLS and EVLA with a survey.

METHODS: 158 patients who had a surgical treatment for varicose veins between 2007 and 2011 at the Gent University Hospital filled in an Aberdeen Varicose Vein Questionnaire (AVVQ) , a pain score (VAS) ,a quality of life questionnaire (SF 36) and a chronic venous questionnaire (CIVIQ -2) . Treatment consisted of HLS or EVLA, of VSM and/or VSP, uni- or bilateral.

RESULTS: The mean patient satisfaction was 83.4% (81.0% after HLS and 79.3% after EVLA ($P=.179$)) . AVVQ-score improved by 11.88 points(11.70 after HLS, 12.12 after EVLA ($P=.357$)). Pain score in the first week after surgery was higher after EVLA, 5.0 vs. 4.2 after HLS ($P=.060$). After 17.5 days patients were able to resume work (18.8 days after HLS, 16.4 days after EVLA ($P=.308$)). The AVVQ-score after treatment increased to 9.94 in men and 19.46 in women ($P<.001$). Patients who smoked scored worse on the preoperative AVVQ than non-smokers, 33.94 vs. 25.89 ($P=.015$). This could also be observed in patients with post-thrombotic syndrome (PTS), AVVQ-score of 37.60 in patients with PTS vs. 26.09 without PTS.

CONCLUSION: Conventional surgery and EVLA have a comparable effect on quality of life in the long term. Patient satisfaction after surgical treatment for varicose veins is high and similar between both techniques. Sex, smoking and PTS may have an impact on quality of life. Shorter sick leave and faster return to occupational activities should be encouraged in Belgium, especially when EVLA or radiofrequency ablation is used.



3. Sarah Gallala

Deep vein thrombosis versus congenital abnormality

Introduction: 26 year old female patient diagnosed with PIGI and DVT of left leg three years before her first puerperium. Patient has been treated for a DVT since the end of her pregnancy with lifelong AVK (INR 2-3), she was told that a future pregnancy would not be an option anymore. She now consults us because of a bothering suprapubian varicose vein (C2).

Method: At clinical examination there is no difference in circumference between both legs, a significant suprapubian vein is visible. A contrast phlebogram shows normal deep veins for the left leg but leads to suspect a left iliac vein atresia. An MRI confirms this diagnosis. Oral anticoagulant therapy was stopped. Four months later thrombophilia tests were performed and results were normal.

Discussion: Frequently young women with this type of condition are told to need lifelong treatment with an oral anticoagulant and are advised not to get pregnant again. All this without correct investigation of anatomic or hematological abnormalities.

Conclusion: At present time the young lady is feeling well; she was told that pregnancy would not affect her current condition or cause any complications. DVT can be prevented during pregnancy with the use of adapted LMWH and class II compression stockings. Once the patient will no longer have a pregnancy wish, sclerotherapy of the suprapubian varicose vein can be performed.



4. Yannick Goubau

Endovenous laser ablation of the great saphenous vein using a bare fibre versus a tulip fibre. A randomized clinical trial

Objective: This clinical trial aimed to evaluate the clinical results of the use of a tulip fibre versus the use of a bare fibre for endovenous laser ablation.

Methods: In a multicentre prospective randomised trial, hundred seventy four patients were randomised for the treatment of great saphenous vein reflux. A duplex scan was scheduled one month, six months and one year postoperatively. Ecchymosis was measured on the 5th postoperative day. Also Pain, analgesics requirement, postoperative quality of life (CIVIQ2) and patient satisfaction rate were noted.

Results: Patients treated with a tulip fibre had significantly less postoperative ecchymosis (0.04 vs 0.21; $p < 0.001$) and pain (5th day) (1.00 vs 2.00; $p < 0.001$) and had a better postoperative quality of life (27 vs 32; $p = 0.023$). There was no difference in analgesic intake ($p = 0.11$) and patient satisfaction rate ($p = 0.564$). The total occlusion rate at one year was 97.02% and there was no significant difference between the two groups ($p = 0.309$).

Conclusion: Using a Tulip fibre for EVLA of the great saphenous vein results, when compared with the use of a bare fibre, results in equal occlusion rates at one year but causes less postoperative ecchymosis and pain and in a better postoperative quality of life.



Endovenous Laser treatment of the great saphenous vein: measurement of the pullback speed of the fiber by magnetic tracking

Introduction: The average linear endovenous energy density (LEED) delivered during endovenous laser treatment (ELT) of the saphenous vein is determinant in the success of this therapy. Recanalization and side effects are energy dependent.

Objective: The purpose of this study was to evaluate in real time the fiber pullback speed.

Methods: In order to measure in real time the motion of the fiber inside the saphenous vein, an electromagnetic 3D tracking device was used to monitor in real time the fiber pullback speed. This tracking system was composed of a transmitter and a sensor. The sensor was attached to the fiber. It allowed the localization of this sensor: 3D position (X, Y, Z) regarding the reference defined by the transmitter with a precision of 0.5 mm.

Results: In a series of 18 patients (Mean age: 53 ± 14 years), 20 consecutive great saphenous veins were treated with ELT. The veins were treated with a 1500 nm Diode laser with a power of 7W, CW mode. The fiber was moved manually. Thanks to graduation of the catheter every centimeter, and a sound delivered by the laser every second, the operator could estimate the pullback speed at 1mm/s. The average length of the treated vein was 29.9 cm (SD: 10.5 cm). LEED was 71 J/cm (SD: 10 J/cm). The mean pullback speed was 1.02 ± 0.15 mm/s similar to the speed the physician wanted to obtain. Based on quality control, safety standards, and regulations official documents for medical lasers, where a 20% accuracy is admitted; only 1 patient was treated with an average pullback speed inferior to 0.8mm/s (0.77 cm/s) and 2 patients were treated with an average pullback speed superior to 1.2 mm/s (1.26 cm/s and 1.32 cm/s).

Conclusion: Consequently, even for a well trained physician, variations can be observed. These variations could easily explain why complications (too low speed and consequently too high LEED) or recurrences (too fast speed and consequently too low LEED) are sometimes reported in clinical studies. A standardized or an automatic withdrawal of the fiber could possibly improve this technique but remains to be carefully evaluated.



6. W. Malskat, M. de Maeseneer.

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Extensive hematoma in the superficial posterior compartment with threatening compartment syndrome after ambulatory phlebectomy

A 71- year old male on chronic anticoagulation was treated with ambulatory phlebectomy for insufficient tributaries of the great saphenous vein of the right leg. Two days postoperatively the patient reported progressive severe pain and increasing swelling of the right calf, based on an extensive hematoma in the superficial medial gastrocnemius compartment. After initial unsuccessful conservative treatment, surgical evacuation of the hematoma after one week resulted in dramatic improvement of the patient's clinical situation. In patients on chronic anticoagulation additional precautions are indicated to avoid major bleeding complications after ambulatory phlebectomy.



Chronische pijnklachten bovenbeen na VNUS ClosureFAST vena saphena magna onder lokale verdoving

Voor de behandeling van de insufficiënte VSM worden in het Centrum Oosterwal per jaar >2000 VNUS procedures uitgevoerd; een behandeling die gekenmerkt wordt door pijnvrij postoperatief herstel.

In de laatste 3 jaar zagen wij bij twee patiënten met persisterende pijnklachten ter hoogte van de aanprikplaats mediaal boven de knie. De patiënten meldden zich 3 maanden postoperatief met invaliderende pijnklachten. Klachtenduur nu 10 en 24 maanden.

Beide vrouw, middelbare leeftijd, VSM links. Er is een intermitterende, diepe lokale pijn zonder uitstraling. Patiënten zijn in hun mobiliteit beperkt, dagelijkse pijnstilling is nodig. Lichamelijk onderzoek: allodynie zonder hypesthesie, geen klopp- of drukpijn. Geen tekenen van flebitis, geen neurinoom. Duplex: occlusie VSM, diep veneus geen afwijkingen. Herhaling duplex: geen nieuwe bevindingen.

Bij één van de patiënten werd een afwijkende SSEP gezien (n. femoralis).

Beide patiënten worden via de pijnpoli behandeld met TENS of Gabapentine met matig effect.



8. Roopram

Endoveneuze laserbehandeling vergeleken met conventionele chirurgie in de behandeling van insufficiëntie van de vena saphena parva: korte termijn resultaten van een multicenter randomized controlled trial.

Doel: In dit multicenter gerandomiseerde klinische onderzoek wordt endoveneuze laserbehandeling vergeleken met conventionele chirurgie voor de behandeling van varices op basis van een insufficiënte vena saphena parva (+crosse).

Methode: In twee Nederlandse ziekenhuizen werden 189 patiënten geïncludeerd en gerandomiseerd tussen endoveneuze laserbehandeling (810nm Laser) en crossectomie van de vena saphena parva. Eindpunten waren therapiefalen gemeten met duplex (6 weken na behandeling), peri-operatieve pijn, kwaliteit van leven, operatieduur, moeilijkheidsgraad van de ingreep, complicaties, cosmetisch resultaat en aantal dagen tot hervatting van werk en normale bezigheden. Pijn werd gemeten op een Visual Analogue Scale (VAS). Kwaliteit van leven werd gemeten met de Aberdeen Varicose Vein Questionnaire (AVVQ) en EuroQoL-5D. De follow-up duur in dit artikel bedraagt 6 weken.

Resultaten: 175 patiënten zijn behandeld en geanalyseerd. 118 patiënten (67%) ondergingen endoveneuze laserbehandeling, 57 patiënten (33%) ondergingen crossectomie. De patiëntkarakteristieken waren in beide groepen gelijk. In de crossectomiegroep was er in 21,2% van de behandelingen sprake van therapiefalen ten opzichte van 0,9% in de lasergroep. Beide behandelingen gaven vermindering van pijnklachten na 6 weken. Er waren geen significante verschillen tussen de beide groepen met betrekking tot kwaliteit van leven. Beide behandelingen gaven wel verbetering van kwaliteit van leven. Ook met betrekking tot de cosmetiek waren er geen verschillen. Na endoveneuze laserbehandeling konden patiënten sneller aan het werk. De operatieduur was langer in de crossectomiegroep. Na 2 weken kwamen er significant meer sensibiliateitsstoornissen voor in de crossectomiegroep: 31,4% versus 16,5% in de lasergroep. 9,8% van de patiënten in de crossectomiegroep ontwikkelde een wondinfectie versus geen patiënten in de lasergroep.

Conclusies: Endoveneuze laserbehandeling heeft minder kans op therapiefalen, is sneller, is gemakkelijker en geeft minder complicaties in vergelijking met de klassieke crossectomie. Op gebied van pijn en kwaliteit van leven zijn beide behandelingen vergelijkbaar.

